GOOLY CONSULTANCY SERVICES
ISO 9001 : 2015 Certified & NABL Accreditated Laboratory as per ISO/IEC - 17025 - 2017
Corporate off : No. 230, Opp. G.R. Lavender Apartments, Sai Enclave Layout, Kothanur Dinne, J.P. Nagar 8th Phase, Bangalore - 560 076.
Contact: +91-80-42277023/24, 9535200024, Email : info@gcslirm.com, goolyconsultancyservices@yahoo.com, www.gcslabindia.com

TEST REPORT ON PHYSICAL PROPERTIES OF CEMENT

lame of Client: Bruhat Bangalore Mahanagara Palike
ddress: Yelahanka Division
ackage No: Package - 03
lame of Work: Improvements to roads, drains and other developmental works in ward no- 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division (Package -03)

lame Contractor: M/s RAM & Co , Bangalore
lame of PMC: M/s Gooly Consultancy services, Bangalore
)ate of Receipt: 11-06-2020
ample ID No: 00611-7/1
.ocation: Ch 0 00 to 150M SB College Drain
ampling : Sample Received from the site and Tested
ample Identification*: Penna OPC 43 grade
eference to BIS codes Test Method:

IS 4031(Part 1) 1996(RA 2016) Determination Of Fineness By Dry Sieving
IS 4031(Part 3) 1988 (RA 2019) Determination Of Soundness
IS 4031 (Part 4) 1988 (RA 2019) Determination Of Consistency Of Standard Cement Paste
IS 4031 (Part 5) 1988 (RA 2019) Determination Of Initial & Final Setting Time
IS 4031 (Part 6) 1988 (RA 2019) Determination Of Compressive Strength
IS 4031 (Part 11) 1988 (RA 2019) Determination Of Density

Specification :

IS 269 : 2015 Ordinary Portland Cement

ondition of sample: Satisfactory
)ate of test: 12-06-2020 to 10-07-2020

Sl.No	Physical properties	Results	Units	Requirement as per IS 269: 2015		
				33 Grade	43 Grade	53 Grade
1	Standard Consistency	30 5	%	Not specified	Not specified	Not specified
2	Initial Setting time	165	minutes	Min 30 minutes	Min 30 minutes	Min 30 minutes
3	Final Setting time	360	minutes	Max 600 minutes	Max 600 minutes	Max 600 minutes
4	Fineness by dry sieving	9 3	%	–	–	–
6	Soundness (Le Chatelier's Method)	1	mm	Max 10 mm	Max 10 mm	Max 10 mm
8	Density	3 15	g/cm^3	–	–	–

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

M/s RAM & CO COMPANY

ıple ID No: 00613-7/1

ło	Physical properties	Results	Units	Requirement as per IS 269: 2015		
				33 Grade	43 Grade	53 Grade
ı	Compressive Strength					
	3 Days	28.0	N/mm^2	Min 16 N/mm^2	Min 23 N/mm^2	Min 27 N/mm^2
	7 Days	38.5	N/mm^2	Min 22 N/mm^2	Min 33 N/mm^2	Min 37 N/mm^2
	28 Days	45.5	N/mm^2	Min 33 N/mm^2, Max 48 N/mm^2	Min 43 N/mm^2, Max 58 N/mm^2	Min 53 N/mm^2

marks:

The test results pertain to the number of sample Received and Tested
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part
Samples will be disposed after 90 days from the date of issue of test certificate.

epared By: **Tested By:**
ıshpa D B **Sree Charan S**

Gooly Consultancy Services Bangalore

Project Manager

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ ಬಿ ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-೫೯

M/s. RAM & COMPANY

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TEST REPORT ON PHYSICAL PROPERTIES OF FINE AGGREGATE

ıe of Client: Bruhat Bangalore Mahanagara Palike

ress: Yelahanka Division

kage No: Package - 03

ne of Work: Improvements to roads, drains and other developmental works in ward no- 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division (Package -03)

ne Contractor: M/s RAM & Co , Bangalore

ne of PMC: M/s Gooly Consultancy services, Bangalore

e of Receipt: 11-06-2020

nple ID No: 00611-7/3

:ation: Ch:0 00 to 150M SB College Drain

npling : Sample Received from the site and Tested

nple Identification*: M-Sand

'erence to BIS code Test Method:

IS 2386 (Part 1) : 1963 (RA 2016) Particle Size And Shape Cl 2

IS 2386 (Part 3) : 1963 (RA 2016) Specific gravity, density, voids, absorption and bulking

IS 2386 (Part 4) :1963 (RA 2016) Mechanical Properties

Specification:

IS 383 : 2016 Coarse and fine aggregate for concrete

ndition of sample: Satisfactory

te of test: 12-06-2020 to 15-06-2020

EVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF FINE AGGREGATE:

tal weight taken: 1000 grams

L.No	Sieve Designation	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383 : 2016 Table-9, (Cl-6.3)				Remarks
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV	
1	10 mm	0	0	0	100	100	100	100	100	The tested Sample confirms to Grading Zone- II
2	4.75 mm	12	12	1 2	98 8	90-100	90-100	90-100	95-100	
3	2.36 mm	175	187	18 7	81 3	60-95	75-100	85-100	95-100	
4	1.18 mm	215	402	40 2	59 8	30-70	55-90	75-100	90-100	
5	600 micron	145	547	54 7	45 3	15-34	35-59	60-79	80-100	
6	300 micron	168	715	71 5	28 5	5-20	8-30	12-40	15-50	
7	150 micron	202	917	91 7	8 3	0-10	0-10	0-10	0-15	
8	Pan	83	1000	100	0	---	---	---	---	

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ಬ.ಬ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

M/s RAM & COMPANY

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TEST REPORT ON CEMENT CONCRETE CUBES

ıe of Client: Bruhat Bangalore Mahanagara Palike

lress: Yelahanka Division

kage No: Package - 03

ne of Work: Improvements to roads, drains and other developmental works in ward no- 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division (Package -03)

ne of Contractor: M/s RAM & Co., Bangalore

ne of PMC: M/s Gooly Consultancy services, Bangalore

mple Identification*: C C Cube / 150mmx150mmx150mm / M - 20 / 28 days Compressive Strength

ference to codes: **Test Method**:

IS 516 : 1959 (RA 2018) Methods Of Tests For Strength Of Concrete Cl.5

Specification:

IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

ndition of sample: Satisfactory

mpressive strength :

	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
	1/1	SB College Drain	M-20	01-Jul-20	29-Jul-20	150*150 *150	22500	8562	465	20.67	
	1/2	SB College Drain	M-20	01-Jul-20	29-Jul-20	150*150 *150	22500	8527	475	21.12	21.1
	1/3	SB College Drain	M-20	01-Jul-20	29-Jul-20	150*150 *150	22500	8591	485	21.56	
	1/1	SB College Drain	M-20	02-Jul-20	30-Jul-20	150*150 *150	22500	8425	495	22.00	
2	1/2	SB College Drain	M-20	02-Jul-20	30-Jul-20	150*150 *150	22500	8463	465	20.67	21.4
	1/3	SB College Drain	M-20	02-Jul-20	30-Jul-20	150*150 *150	22500	8485	485	21.56	
	1/1	BMTC Bus Stop Side Road	M-20	04-Jul-20	01-Aug-20	150*150 *150	22500	8547	455	20.23	
3	1/2	BMTC Bus Stop Side Road	M-20	04-Jul-20	01-Aug-20	150*150 *150	22500	8526	485	21.56	21.0
	1/3	BMTC Bus Stop Side Road	M-20	04-Jul-20	01-Aug-20	150*150 *150	22500	8533	480	21.34	
	1/1	BMTC Bus Stop Side Road	M-20	06-Jul-20	03-Aug-20	150*150 *150	22500	8549	455	20.23	
4	1/2	BMTC Bus Stop Side Road	M-20	06-Jul-20	03-Aug-20	150*150 *150	22500	8411	465	20.67	20.8
	1/3	BMTC Bus Stop Side Road	M-20	06-Jul-20	03-Aug-20	150*150 *150	22500	8566	485	21.56	

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TEST REPORT OF GRADATION FOR GSB

Name of Client:	Bruhat Bangalore Mahanagara Palike
Address:	Yelahanka Division
Package No:	Package - 03
Name of Work:	Improvements to roads, drains and other developmental works in ward no-03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division. (Package -03)
Name of Contractor:	M/s RAM & Co , Bangalore
Name of PMC:	M/s Gooly Consultancy services, Bangalore
Date of Sample Collection:	22.08.2020
Chainage/Location/Land Mark:	Attur Layout
Date of testing:	22.08.2020
Reference to BIS codes:	IS 2386 (Part 1) 1963 (RA 2016) Particle Size and Shape Cl 2
Layer:	GSB

Oven Dry Wt (gm): 10000

Sl No	Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	As per MORTH 5th Revsion Table 400.1 (Garding V)
1	75	0	0	0.00	100.00	100
2	53	155	155	1.55	98.45	80-100
3	26.5	1562	1717	17.17	82.83	55-90
4	9.5	3526	5243	52.43	47.57	35-65
5	4.75	2102	7345	73.45	26.55	25-50
6	2.36	785	8130	81.30	18.70	10-20
7	0.85	956	9086	90.86	9.14	2-10
8	0.425	785	9871	98.71	1.29	0-5
9	pan	129	10000	100.00	0.00	-

Remarks:

M/s. RAM & CO

Contractor/Contractor Representative

Client(AE/AEE/EE)

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Gooly Consultancy Services Bangalore

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TEST REPORTS OF BITUMEN CONTENT & GRADATION DETERMINATION OF DENSE BITUMINOUS MACADAM

me of Client:	Bruhat Bangalore Mahanagara Palike
dress:	Yelahanka Division
ckage No:	Package - 03
me of Work:	Improvements to roads, drains and other developmental works in ward no- 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division. (Package -03)
me Contractor:	M/s RAM & Co., Bangalore
me of PMC:	M/s Gooly Consultancy services, Bangalore
te of Sample llection:	24-Sep-20
ainage/Location nd Mark:	SFS 208 Ch: 00-34 Park road connecting 2nd Cross road
te of testing:	24-Sep-20
pe of Mix:	Dense Bituminous Macadam

TUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
Weight of Mixture before Test, gm	500	As per MORTH Specification for DBM Grade II (50-75mm) Bitumen Content 4.5 min VG-30
Weight of Mixture after Test, gm	477	
Weight of Bitumen Extracted, gm	23	
Bitumen content in %	4.6	

RADATION AFTER EXTRACTION

OTAL WEIGHT OF SAMPLE: 477 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500-10
37.5	0	0.00	0.00	100.00	100
26.5	35	7.34	7.34	92.66	90 - 100
19	90	18.87	26.21	73.79	71-95
13.2	78	16.35	42.56	57.44	56-80
4.75	85	17.82	60.38	39.62	38-54
2.36	45	9.43	69.81	30.19	28-42
0.3	75	15.72	85.53	14.47	7-21
0.075	42	8.81	94.34	5.66	2-8

Remarks:

Contractor/Contractor Representative

Client(AE/AEE/EE)

PMC

TEST REPORTS OF BITUMEN CONTENT & GRADATION DETERMINATION OF DENSE BITUMINOUS MACADAM

ame of Client:	Bruhat Bangalore Mahanagara Palike
ddress:	Yelahanka Division
ackage No:	Package - 03
ame of Work:	Improvements to roads, drains and other developmental works in ward no- 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division (Package -03)
ame Contractor:	M/s RAM & Co., Bangalore
ame of PMC:	M/s Gooly Consultancy services, Bangalore
ate of Sample ollection:	15-Oct-20
hainage/Location .and Mark:	Girls Hostel Front Road
ate of testing:	15-Oct-20
ype of Mix:	Dense Bituminous Macadam

ITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
. Weight of Mixture before Test, gm	500	As per MORTH Specification for DBM Grade II (50-75mm) Bitumen Content 4.5 min VG-30
. Weight of Mixture after Test, gm	477	
. Weight of Bitumen Extracted, gm	23	
. Bitumen content in %	4.6	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 477 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500-10
37.5	0	0.00	0.00	100.00	100
26.5	25	5.24	5.24	94.76	90 - 100
19	63	13.21	18.45	81.55	71-95
13.2	56	11.74	30.19	69.81	56-80
4.75	96	20.13	50.31	49.69	38-54
2.36	88	18.45	68.76	31.24	28-42
0.3	75	15.72	84.49	15.51	7-21
0.075	44	9.22	93.71	6.29	2-8

Remarks:

Contractor/Contractor Representative

Client(AE/AEE/EE)

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Testing of Construction Materials - Mechanical & Chemical, Soil & Non Destructive Testing Services, Project Management Consultancy, Third Party Quality Assurance, Detailed Project Report, Rehabilitation, Road Safety Review & Structural design

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TEST REPORTS OF BITUMEN CONTENT & GRADATION DETERMINATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 03
Name of Work: Improvements to roads, drains and other developmental works in ward no- 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division. (Package -03)
Name Contractor: M/s RAM & Co , Bangalore
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 15-Oct-2020
Chainage/Location /Land Mark: SFS 208 Ch.0 00 to 315 2nd Cross Road
Date of testing: 15-Oct-2020
Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	473	
3. Weight of Binder Extracted, gm	27	
4. Binder content in %	5.4	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 473 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	36	7.61	7.61	92.39	90 - 100
9.5	48	10.15	17.76	82.24	70-88
4.75	74	15.64	33.40	66.60	53-71
2.36	88	18.60	52.01	47.99	42-58
1.18	48	10.15	62.16	37.84	34-48
0.6	38	8.03	70.19	29.81	26-38
0.3	32	6.77	76.96	23.04	18-28
0.15	32	6.77	83.72	16.28	12-20
0.075	30	6.34	90.06	9.94	4-10

Remarks:

Contractor/Contractor Representative | Client(AE/AEE/EE) | PMC

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Third Party Quality Assurance, Detailed Project Report, Rehabilitation, Road Safety Review & Structural design

TEST REPORTS OF BITUMEN CONTENT & GRADATION DETERMINATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike

Address: Yelahanka Division

Package No: Package - 03

Name of Work: Improvements to roads, drains and other developmental works in ward no- 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division. (Package -03)

Name Contractor: M/s RAM & Co., Bangalore

Name of PMC: M/s Gooly Consultancy services, Bangalore

Date of Sample Collection: 16-Oct-2020

Chainage/Location /Land Mark: Connecting Road 3rd A and 3rd B Main Road (Park Surrounding areas)

Date of testing: 16-Oct-2020

Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500 17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	471	
3. Weight of Binder Extracted, gm	29	
4. Binder content in %	5.8	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 471 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	30	6.37	6.37	93.63	90 - 100
9.5	85	18.05	24.42	75.58	70-88
4.75	74	15.71	40.13	59.87	53-71
2.36	60	12.74	52.87	47.13	42-58
1.18	56	11.89	64.76	35.24	34-48
0.6	41	8.70	73.46	26.54	26-38
0.3	32	6.79	80.25	19.75	18-28
0.15	28	5.94	86.20	13.80	12-20
0.075	32	6.79	92.99	7.01	4-10

Remarks:

Contractor/Contractor Representative

Client(AE/AEE/EE)

PMC

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ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬೆ.ಮ.ಪಾಲಿಕೆ, ಬೆಂಗಳೂರು-106

Testing of Construction Material - Mechanical, Chemical, Soil & Non Destructive Testing Services, Project Management Consultancy, Third Party Quality Assurance, Detailed Project Report, Rehabilitation, Road Safety Review & Structural design

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TEST REPORTS OF BITUMEN CONTENT & GRADATION DETERMINATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 03
Name of Work: Improvements to roads, drains and other developmental works in ward no- 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division. (Package -03)
Name Contractor: M/s RAM & Co , Bangalore
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 17-Oct-2020
Chainage/Location /Land Mark: 2nd Main and 6th Cross Road (Subbu bakery Road)
Date of testing: 17-Oct-2020
Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	472	
3. Weight of Binder Extracted, gm	28	
4. Binder content in %	5.6	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 472 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	29	6.14	6.14	93.86	90 - 100
9.5	98	20.76	26.91	73.09	70-88
4.75	90	19.07	45.97	54.03	53-71
2.36	48	10.17	56.14	43.86	42-58
1.18	46	9.75	65.89	34.11	34-48
0.6	36	7.63	73.52	26.48	26-38
0.3	28	5.93	79.45	20.55	18-28
0.15	33	6.99	86.44	13.56	12-20
0.075	23	4.87	91.31	8.69	4-10

Remarks:

Contractor/Contractor Representative | Client(AE/AEE/EE) | PMC

Gooly Consultancy Bangalore

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TEST REPORTS OF BITUMEN CONTENT & GRADATION DETERMINATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 03
Name of Work: Improvements to roads, drains and other developmental works in ward no- 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division. (Package -03)
Name Contractor: M/s RAM & Co., Bangalore
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 20-Oct-2020
Chainage/Location /Land Mark: SFS 208 Ch: 00-31 Double road near Veer savarkar bridge (LHS)
Date of testing: 20-Oct-2020
Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	472	
3. Weight of Binder Extracted, gm	28	
4. Binder content in %	5.6	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 472 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	32	6.78	6.78	93.22	90 - 100
9.5	66	13.98	20.76	79.24	70-88
4.75	74	15.68	36.44	63.56	53-71
2.36	85	18.01	54.45	45.55	42-58
1.18	48	10.17	64.62	35.38	34-48
0.6	41	8.69	73.31	26.69	26-38
0.3	33	6.99	80.30	19.70	18-28
0.15	32	6.78	87.08	12.92	12-20
0.075	15	3.18	90.25	9.75	4-10

Remarks:

Contractor/Contractor Representative

Client/AE/AEE/EE

PMC

Gooly Consultancy Services Bangalore

Soil & Son Destructive Testing Services, Project Management Consultancy, Rehabilitation, Road Safety Review & Structural design

Testing of Construction Material - Mechanical & Chemical

GOOLY CONSULTANCY SERVICES
ISO 9001 : 2015 Certified & NABL Accreditated Laboratory as per ISO/IEC - 17025 - 2017
Corporate off : No. 230, Opp. G.R. Lavender Apartments, Sai Enclave Layout, Kothanur Dinne, J.P. Nagar 8th Phase, Bangalore - 560 076.
Contact: +91-80-42277023/24, 9535200024, Email : info@gcsbm.com, goolyconsultancyservices@yahoo.com, www.gcslabindia.com

TEST REPORTS OF BITUMEN CONTENT & GRADATION DETERMINATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 03
Name of Work: Improvements to roads, drains and other developmental works in ward no- 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division. (Package -03)
Name Contractor: M/s RAM & Co., Bangalore
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 21-Oct-2020
Chainage/Location /Land Mark: SFS 407 Ch: 00-210 3rd Main road from Police chowki
Date of testing: 21-Oct-2020
Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	473	
3. Weight of Binder Extracted, gm	27	
4. Binder content in %	5.4	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 473 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	23	4.86	4.86	95.14	90 - 100
9.5	102	21.56	26.43	73.57	70-88
4.75	86	18.18	44.61	55.39	53-71
2.36	55	11.63	56.24	43.76	42-58
1.18	45	9.51	65.75	34.25	34-48
0.6	35	7.40	73.15	26.85	26-38
0.3	32	6.77	79.92	20.08	18-28
0.15	28	5.92	85.84	14.16	12-20
0.075	25	5.29	91.12	8.88	4-10

Remarks:

Contractor/Contractor Representative

Client(AE/AEE/EE)

PMC

Gooly Consultancy Services Bangalore

GOOLY CONSULTANCY SERVICES
ISO 9001 : 2015 Certified & NABL Accreditated Laboratory as per ISO/IEC - 17025 - 2017
Corporate off : No. 230, Opp. G.R. Lavender Apartments, Sai Enclave Layout, Kothanur Dinne, J.P. Nagar 8th Phase, Bangalore - 560 076.
Contact: +91-80-42277023/24, 9535200024. Email : info@gcslim.com, goolyconsultancyservices@yahoo.com, www.gcslabindia.com

TEST REPORTS OF BITUMEN CONTENT & GRADATION DETERMINATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 03
Name of Work: Improvements to roads, drains and other developmental works in ward no- 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division. (Package -03)
Name Contractor: M/s RAM & Co., Bangalore
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 22-Oct-2020
Chainage/Location /Land Mark: SFS 407 Ch: 00-121 4th Main Link road (Before House#166)
Date of testing: 22-Oct-2020
Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	473	
3. Weight of Binder Extracted, gm	27	
4. Binder content in %	5.4	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 473 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	25	5.29	5.29	94.71	90 - 100
9.5	110	23.26	28.54	71.46	70-88
4.75	79	16.70	45.24	54.76	53-71
2.36	56	11.84	57.08	42.92	42-58
1.18	32	6.77	63.85	36.15	34-48
0.6	43	9.09	72.94	27.06	26-38
0.3	37	7.82	80.76	19.24	18-28
0.15	26	5.50	86.26	13.74	12-20
0.075	22	4.65	90.91	9.09	4-10

Remarks:

Contractor/Contractor Representative

Client(AE/AEE/EE)

PMC

Gooly Consultancy Services Bangalore

Third Party Quality Assurance of Construction Materials, Mechanical & Chemical, Soil & Non Destructive Testing Services, Project Management Consultancy, Detailed Project Report, Rehabilitation, Road Safety Review & Structural design

GOOLY CONSULTANCY SERVICES
ISO 9001 : 2015 Certified & NABL Accreditated Laboratory as per ISO/IEC - 17025 - 2017
Corporate off : No. 230, Opp. G.R. Lavender Apartments, Sai Enclave Layout, Kothanur Dinne, J.P. Nagar 8th Phase, Bangalore - 560 076.
Contact: +91-80-42277023/24, 9535200024, Email : info@gcsfirm.com, goolyconsultancyservices@yahoo.com, www.gcslabindia.com

TEST REPORTS OF BITUMEN CONTENT & GRADATION DETERMINATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 03
Name of Work: Improvements to roads, drains and other developmental works in ward no- 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division. (Package -03)
Name Contractor: M/s RAM & Co., Bangalore
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 26-Oct-2020
Chainage/Location /Land Mark: Yelehanka Newtown 4th Phase Ch 00-405 BMTC Right side road
Date of testing: 26-Oct-2020
Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	473	
3. Weight of Binder Extracted, gm	27	
4. Binder content in %	5.4	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 473 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	33	6.98	6.98	93.02	90 - 100
9.5	99	20.93	27.91	72.09	70-88
4.75	75	15.86	43.76	56.24	53-71
2.36	44	9.30	53.07	46.93	42-58
1.18	52	10.99	64.06	35.94	34-48
0.6	42	8.88	72.94	27.06	26-38
0.3	36	7.61	80.55	19.45	18-28
0.15	22	4.65	85.20	14.80	12-20
0.075	25	5.29	90.49	9.51	4-10

Remarks:

Contractor/Contractor Representative | **Client (AE/AEE/EE)** | **PMC**